REMARKS

The Applicants thank the Examiner for the thorough consideration given the present application. Claims 2-6 and 8 were previously cancelled. Claims 1, 7, and 9 - 13 are pending. Claims 1 and 7 are amended. Claims 1 and 7 are independent. The Examiner is respectfully requested to reconsider the rejections in view of the amendments and remarks set forth herein.

Examiner Interview

If, during further examination of the present application, any further discussion with the Applicants' Representative would advance the prosecution of the present application, the Examiner is encouraged to contact Carl T. Thomsen, at 1-703-208-4030 (direct line) at his convenience.

Rejection Under 35 U.S.C. § 112, second paragraph

Claims 1, 7, and 9-13 stand rejected under 35 U.S.C. § 112, second paragraph. This rejection is respectfully traversed.

The Examiner asserts that the meaning of maximum and minimum negative pressure is ambiguous.

In order to overcome this rejection, the Applicants have amended claims 1 and 7 to eliminate the alleged ambiguity.

Specifically, **independent claims 1 and 7** have been amended to recite

"wherein the minimum and maximum negative pressures are pressures which are less than atmospheric temperature,

wherein the minimum negative pressure is closer to the atmospheric pressure than the maximum negative pressure, and the maximum negative pressure is a lower absolute pressure than the minimum negative pressure."

As is commonly known in the English language, "negative pressure" is defined as a pressure less than that of the atmosphere.

In addition, an "absolute pressure" is defined as a pressure measured relative to a pressure of "absolute zero."

Further, as is commonly known to own skilled in the art, the value of "negative pressure" changes inversely with the value of "absolute pressure".

The Applicants respectfully submit that claims 1 and 7, as amended herein, particularly point out and distinctly claim the subject matter which the Applicants regard as the invention.

The **Table** below provides further evidence that independent claims 1 and 7, as amended herein, are both

- worded in a manner which is non-ambiguous, and
- worded in a manner which is consistent with the common usage of the English language.

The table below can be used to convert between common vacuum units:

Source: http://www.engineeringtoolbox.com/vacuum-converter-d_460.html

% Vacuum	Torr (mm Mercury)	Micron	Psia, (lb/in^2) abs	Inches Mercury Absolute	Inches Mercury Gauge	kPa abs
0.0	760.0	760,000	14.7	29.92	0.00	101.4
1.3	750.0	750,000	14.5	29.5	0.42	99.9
1.9	735.6	735,600	14.2	28.9	1.02	97.7
7.9	700.0	700,000	13.5	27.6	2.32	93.5
21.0	600.0	600,000	11.6	23.6	6.32	79.9
34.0	500.0	500,000	9.7	19.7	10.22	66.7
47.0	400.0	400,000	7.7	15.7	14.22	53.2
50.0	380.0	380,000	7.3	15.0	14.92	50.8
61.0	300.0	300,000	5.8	11.8	18.12	40
74.0	200.0	200,000	3.9	7.85	22.07	26.6
87.0	100.0	100,000	1.93	3.94	25.98	13.3
88.0	90.0	90,000	1.74	3.54	26.38	12
89.5	80.0	80,000	1.55	3.15	26.77	10.7
90.8	70.0	70,000	1.35	2.76	27.16	9.3
92.1	60.0	60,000	1.16	2.36	27.56	8
93.0	51.7	51,700	1.00	2.03	27.89	6.9
93.5	50.0	50,000	0.97	1.97	27.95	6.7
94.8	40.0	40,000	0.77	1.57	28.35	5.3
96.1	30.0	30,000	0.58	1.18	28.74	4
96.6	25.4	25,400	0.49	1.00	28.92	3.4
97.4	20.0	20,000	0.39	0.785	29.14	2.7
98.7	10.0	10,000	0.193	0.394	29.53	1.3
99.0	7.6	7,600	0.147	0.299	29.62	1.0
99.9	1.0	1,000	0.01934	0.03937	29.88	0.13
99.9	0.75	750	0.0145	0.0295	29.89	0.1
99.99	0.10	100	0.00193	0.00394	29.916	0.013
99.999	0.01	10	0.000193	0.000394	29.9196	0.0013
100	0.00	0	0	0	29.92	0

The Applicants submit that the rejection under 35 U.S.C. 112, second paragraph has been overcome.

Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Rejections Under 35 U.S.C. §103(a)

Claims 1, 7, and 9-13 stand rejected under 35 U.S.C. §102(b) as being anticipated by Garcia (U.S. 5,842,579) in view of Mori et al. (U.S. 5,191,218).

This rejection is respectfully traversed.

Arguments Regarding Independent Claims 1 and 7 as Amended

While not conceding the appropriateness of the Examiner's rejection, but merely to advance prosecution of the present application, each of independent claims 1 and 7 has been amended to include *inter alia*

"a plurality of work receiving openings penetrating through the conveyor table for receiving works therein, the work receiving openings being spaced apart from each other and arranged in a circular pattern, ...

each of the minute sectional suction channels has an axis extending in a direction that is orthogonal to an axis of the corresponding work receiving opening, and extends from the corresponding work receiving opening to a point that is only part way across the vacuum suction channel in a width direction of the vacuum suction channel, thereby providing a pressure resistance when the vacuum generation mechanism is operated, ...

the maximum negative pressure being determined by an increased work load rate, and the minimum negative pressure being determined by a decreased work load rate."

The Applicants believe that no combination of Garcia and Mori et al. discloses the features as presently claimed.

Regarding Garcia Reference

Difference A.

As can be seen by comparing FIG. 4 of the present application and FIG. 6 of Garcia below,

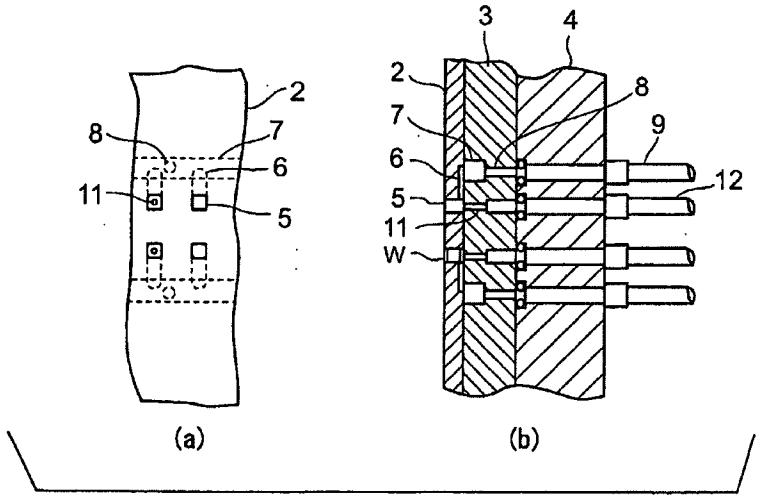

FIG. 4

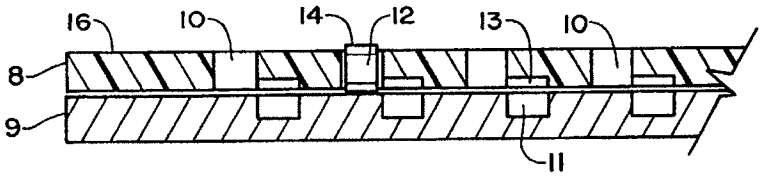

FIGURE 6

the Garcia document clearly does not teach or suggest

"each of the minute sectional suction channels has an axis extending in a direction that is orthogonal to an axis of the corresponding work receiving opening, and extends from the corresponding work receiving opening to a point that is only part way across the vacuum suction channel in a width direction of the vacuum suction channel, thereby providing a pressure resistance when the vacuum generation mechanism is operated," as presently claimed.

Therefore, the so-called minute sectional suction channel **13** of Garcia cannot serve as a pressure resistance when the vacuum generation mechanism is operated, and the vacuum level of the work receiving openings cannot be retained at certain maximum and minimum negative pressures when the works are received in the work receiving openings.

Difference B.

In addition, the Examiner concedes that the Garcia reference fails to disclose

"the negative pressure sensor detecting the vacuum level of the work receiving openings of the conveyor table, and

the adjustment part adjusting the vacuum level of the work receiving openings,

wherein the vacuum level adjustment mechanism includes a compressed air generation source for generating a compressed air,

wherein the adjustment part is adapted to jet out the compressed air from the compressed air generation source to the vacuum leak generation part based on the signal from the negative pressure sensor, and

wherein the adjustment part jets out the compressed air based on the signal from the negative pressure sensor when the vacuum level rises above a maximum negative pressure, and stops the compressed air when the vacuum level falls below a minimum negative pressure,

the maximum negative pressure being determined by an increased work load rate, and the minimum negative pressure being determined by a decreased work load rate," as presently claimed.

The Examiner then asserts that Mori et al. makes up for the deficiency of Garcia. The Applicants respectfully disagree.

Regarding the Mori et al. Reference

Difference A.

FIGS. 6 and 7 of The Mori et al. document merely disclose a vacuum chucking surface **106** for chucking a single wafer **105** on the surface thereof in a fixed position.

This is to say, Mori et al. fail to teach or suggest

"a conveyor table rotatably mounted on the table base, ...

a plurality of work receiving openings penetrating through the table base for receiving works therein, the work receiving openings being spaced apart from each other and arranged in a circular pattern, ...

each of the minute sectional suction channels has an axis extending in a direction that is orthogonal to an axis of the corresponding work receiving opening, and extends from the corresponding work receiving opening to a point that is only part way across the vacuum suction channel in a width direction of the vacuum suction channel, thereby providing a pressure resistance when the vacuum generation mechanism is operated."

Difference B.

The Examiner has pointed out that Mori et al. disclose an adjustment part **(115b).**

However, Mori et al. merely disclose a single wafer **105** held in a fixed position against the flat surface of chucking surface **106** by a vacuum provided via circular grooves **106_2,** wherein the entire groove is exposed to the single wafer **105**.

Mori et al. column 9, lines 35 to 38 merely disclose "first and second gas adjusting valve 115a or 115b, for detecting the inside pressure of a small space between the bottom face (clearance) as defined as the bottom face of the wafer **105** and the chucking surface **106_1...**" See also, Mori et al. FIG. 6 and 7, which clearly illustrate the flat bottom surface of wafer **105** and the chucking surface **106_1**.

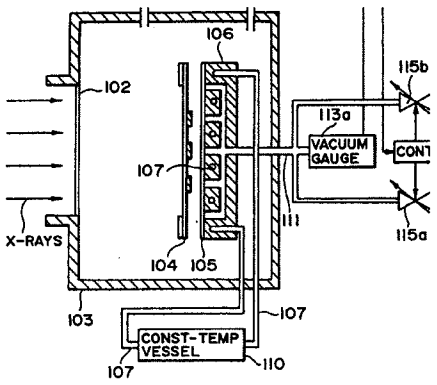

FIG. 6

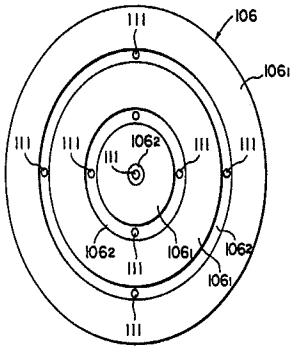

FIG. 7

That is to say, Mori et al. do not teach at all that the vacuum level of the work receiving openings can be securely stabilized by the operation of the adjustment part, regardless of the work load rate of the work receiving openings, or the increased work load rate or the decreased work load rate, as presently claimed.

Furthermore, Mori et al. disclose a vacuum chuck for chucking wafers one at a time, and therefore Mori et al. have nothing to do with the characteristic features of the present invention, or any work load rate of the work receiving openings.

Summary

Since the Garcia and Mori et al. references each discloses differences A and B above, the combination of Garcia and Mori et al cannot teach of suggest the subject matter set forth in each of independent claims 1 and 7, as amended herein.

At least for the reasons explained above, the Applicants respectfully submit that the combination of elements as set forth in each of independent claims 1 and 7 is not disclosed or

made obvious by the prior art of record, including Garcia (U.S. 2001/0008061) and Mori et al. (U.S. 5,191,218).

Therefore, independent claims 1 and 7 are in condition for allowance.

Dependent Claims

All dependent claims are in condition for allowance due to their dependency from allowable independent claims, or due to the additional novel features set forth therein.

All pending claims are now in condition for allowance.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. §103(a) are respectfully requested.

CONCLUSION

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. It is believed that a full and complete response has been made to the outstanding Office Action, and that the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, he is invited to telephone Carl T. Thomsen (Reg. No. 50,786) at (703) 208-4030(direct line).

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§1.16 or 1.17, particularly extension of time fees.

Respectfully submitted,

Date: ***December 23, 2009***

By _____
James M. Slattery
Reg. No. 28,380

BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Road, Suite 100E
P. O. Box 747
Falls Church, VA 22040-0747
(703) 205-8000

JMS:CTT:ktp